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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,474	03/07/2002	Yuichi Ishino	K-2039	1400

7590 03/29/2004  
KANESAKA AND TAKEUCHI  
1423 Powhatan Street  
Alexandria, VA 22314

EXAMINER

ROBERTSON, JEFFREY

ART UNIT PAPER NUMBER

1712

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

<b>Office Action Summary</b>	<b>Application No.</b> 10/091,474	<b>Applicant(s)</b> ISHINO, YUICHI	
	<b>Examiner</b> Jeffrey B. Robertson	<b>Art Unit</b> 1712	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11,14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
       Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
       Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The amendment filed 1/16/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In the specification on page 8, paragraph [0024], and on page 10, paragraph [0028], and paragraph [0031], the molecular weight of the polymer is set forth as number average molecular weight. On page 7, in paragraph [0021], in formula (1), "n" is defined as a real number between 5 and 700. On page 8, in paragraph [0022], "n" is defined as an integer between 1 and 30, and "m" in formula (3) is defined as a real number between 0 and 500. On page 9, in paragraph [0027], in formula (5), "n" is defined as a real number between 5 and 700. On pages 10 and 11, paragraphs [0028] and [0030], in formulas (6) and (7), "x" is defined as a real number between 1 and 500, "y" is defined as a real number between 0 and 100, "z" is defined as a real number between 1 and 100, and "n" is defined as real number between 1 and 135. In addition, in the amendment to the definition for  $R^7$  in paragraph [0028], the definition has been changed from any other alkyl group or an alkyl group containing a functional group to a functional group attached to an alkylene group or a polyoxyalkylene group. Applicant has removed the possibility that  $R^7$  is any other alkyl group and added the possibility that  $R^7$  can be a functional group containing polyoxyalkylene group. The examiner does not understand how "any other alkyl group"

can provide support for a polyether group. Applicant has not identified the support for these amendments and the examiner is unable to find support in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Objections***

2. Claim 18 is objected to because of the following informalities: in line 2, acrylic is misspelled. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 18 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For claim 18, in the definition of  $R^7$ , "x" is defined as a real number between 1 and 500, "y" is defined as a real number between 0 and 100, "z" is defined as a real number between 1 and 100, and "n" is defined as real number between 1 and 135. In the definition for  $R^7$  the definition has been changed from any other alkyl group or an alkyl group containing a functional group to a functional group attached to an alkylene group or a polyoxyalkylene group. Applicant has removed the possibility that  $R^7$  is any other alkyl group and added the possibility that  $R^7$

can be a functional group containing polyoxyalkylene group. For claim 23, the molecular weight of the polymer is set forth as number average molecular weight. As set forth in paragraph 1 above, there appears to be no support in the specification for these changes.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11, 14, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (U.S. Patent No. 6,398,669) and Roberts et al. (U.S. Patent No. 6,313,335).

It is noted that the Roberts reference is provided strictly to show features of Silaplane FM-DA11 not disclosed in the Yokota reference.

For claim 11, in column 2, lines 16-25, Yokota teaches a golf ball that is coated with urethane based resin paint. In column 5, lines 31-43, Yokota teaches Coating Film Composition No. 1, which is a urethane coating composition obtained by reacting a polyol and an isocyanate.

For claims 11 and 21, in column 2, line 66 through column 3, line 1, Yokota teaches that the polysiloxane is grafted to the main chain of the paint. In column 4, lines 7-17, Yokota discloses that the main chain is an acrylic polyol that has several hydroxyl groups, where the polysiloxane would be the branching chain. For claim 22,

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the presence of "several" hydroxyl groups means that there would be at least three branch points formed of polyorganosiloxane. For claim 14, in column 2, lines 37-44, Yokota shows that the backbone of the polysiloxane is a polydimethylsiloxane. In column 6, Table 1, Yokota teaches that Silaplane FM-DA11 is used. In column 7, line 35, Yokota teaches general characteristics of the Silaplane FM-DA series, which is a polydimethylsiloxane that contains hydroxyl groups at one terminal. Roberts, in column 36, lines 46-61, discloses the structure of Silaplane FM-DA11, where the R group in Yokota is butyl. The reaction of Silaplane with the acrylic polyol forms a graft comb copolymer.

For claim 23, in column 2, lines 24-25, Yokota teaches that the molecular weight is from 700-7000, which is within the range claimed by applicant. Yokota does not expressly teach the viscosity and the hydroxyl value of the polysiloxane. However, this appears to be an inherent property of the modified polysiloxane, especially as evidenced by the structure set forth in Roberts, column 36, lines 46-61. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

For claims 19 and 20, in column 4, lines 35-44, Yokota teaches that a solvent is used to prepare the paint, where the solvent is methyl ethyl ketone.

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Yokota fails to expressly teach a coating that contains both polyurethane and an acrylic resin grafted with polyorganosiloxane. However it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the acrylic based coating and the polyurethane based coating to form a single composition in order to coat a golf ball. It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. . . . [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980)

7. Claims 11, 14, and 16-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatch et al. (U.S. Patent No. 5,820,491, cited in the previous office action) in view of Nakinishi et al. (U.S. Patent No. 6,313,249).

For claims 11 and 21, in column 2, lines 55-65, Hatch teaches a urethane topcoat coating composition that is used for a clear coat on golf balls. Here, Hatch teaches that a polyether-modified polysiloxane component is added. Hatch fails to teach the addition of a graft polymer with an acrylic resin backbone and a polysiloxane branch.

For claims 19 and 20, in column 4, lines 20-25, Hatch teaches a solvent such as methyl isobutyl ketone.

For claim 16, in column 12, Table 6, Hatch teaches that the polyurethane is formed through the reaction of a polyol and isocyanate. The polyol is present in 278

parts by weight and the polysiloxane polyether is present in 4.3 parts by weight, which is in the range of 0.01 to 10 parts by weight set forth by applicant.

For claim 11, in column 2, lines 29-50, Nakinishi teaches a graft copolymer that has a carbon-carbon backbone and organopolysiloxane grafts. In column 1, lines 53-59, Nakinishi teaches that the organopolysiloxane-graft polymers are used as coating compositions. For claims 12, 14, 17, and 18, in column 10, lines 7-23, Nakinishi teaches a methacrylate terminated polydimethylsiloxane and methyl methacrylate are copolymerized through radical copolymerization, which would result in a comb polymer having an acrylic resin backbone polymer. For claim 17,  $R^c$  is methyl,  $R^d$  is methacryloxypropyl, and  $n=25$ . For claim 18,  $y=0$ , and  $R^6$ =methyl. The variables  $x$  and  $z$  are positive integers. In column 5, lines 40-42, Nakanishi teaches the presence of hydroxyl acrylate containing monomers.

Nakanishi and Hatch are analogous art in that they both utilize polysiloxane/organic copolymers in coating compositions. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the graft copolymers of Nakanishi as a substitute for the polyether/polysiloxanes of Hatch. The motivation would have been that in column 1, lines 53-59, Nakanishi teaches that the graft polymers of the invention are superior to polyoxyalkylene-modified organopolysiloxanes as additives in coating compositions for such properties as weatherability. One of ordinary skill of the art would have been motivated to make the substitution for this purpose.



***Response to Arguments***

8. Applicant's arguments with respect to claims 11, 14, 16-21 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

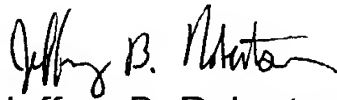
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (571) 272-1092. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeffrey B. Robertson  
Primary Examiner  
Art Unit 1712

JBR